

KIC 010191056

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010191056-01	OBS	5774.01	1.213746	131.742913	182389.5	5.716	47222.8	22346.7	1.62	6791	102.99	8406.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010191056-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

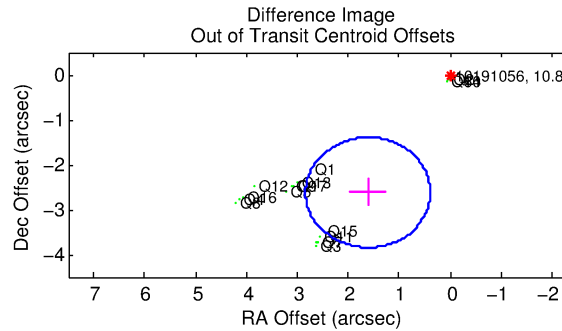
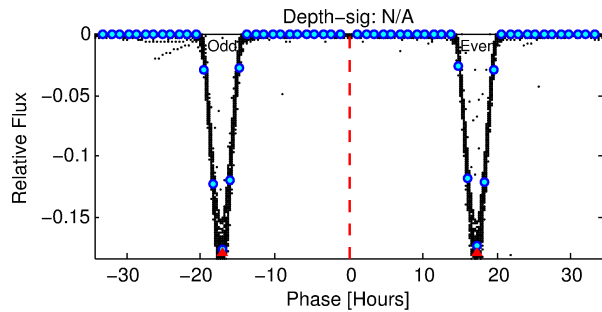
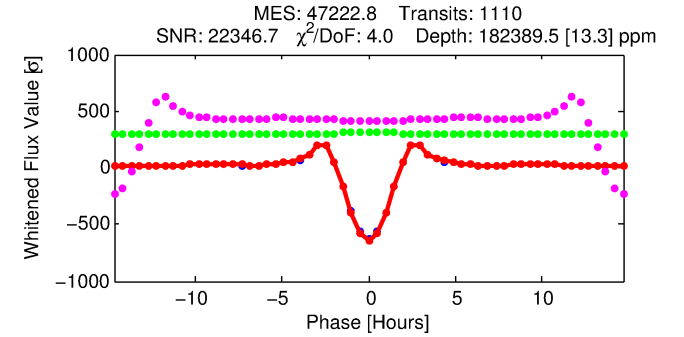
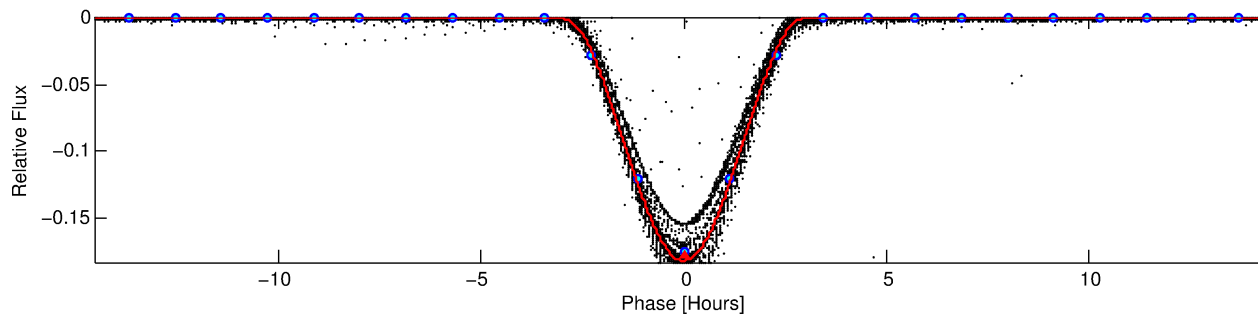
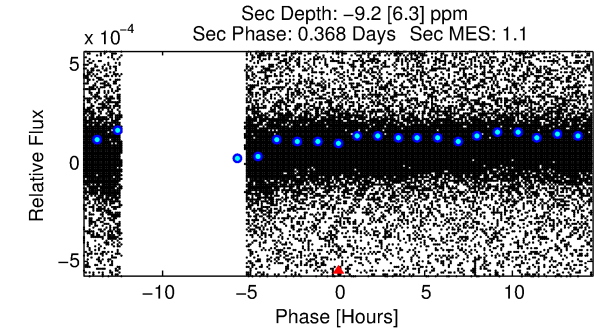
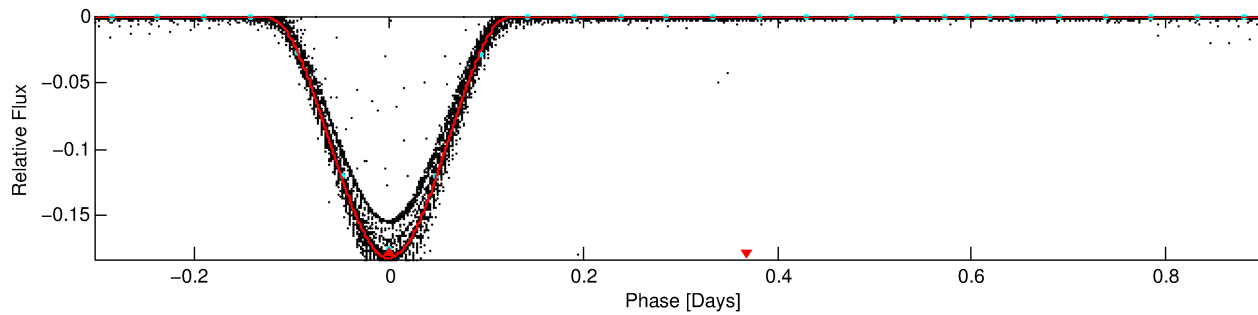
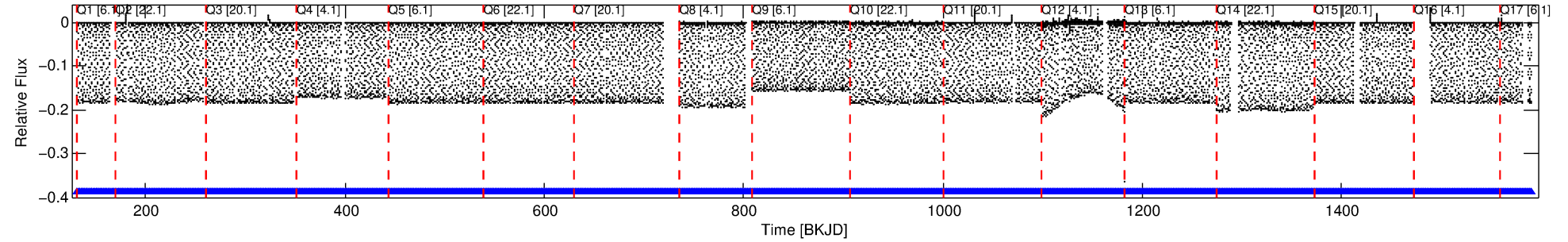
Ephemeris Match Information For 010191056-01

No Significant Match Found

DV One-Page Summary

KIC: 10191056 Candidate: 1 of 1 Period: 1.214 d
KOI: K05774.01 Corr: 0.995

Kp: 10.81 R*: 1.62 Rs Teff: 6791.0 K Logg: 4.14 Fe/H: -0.240



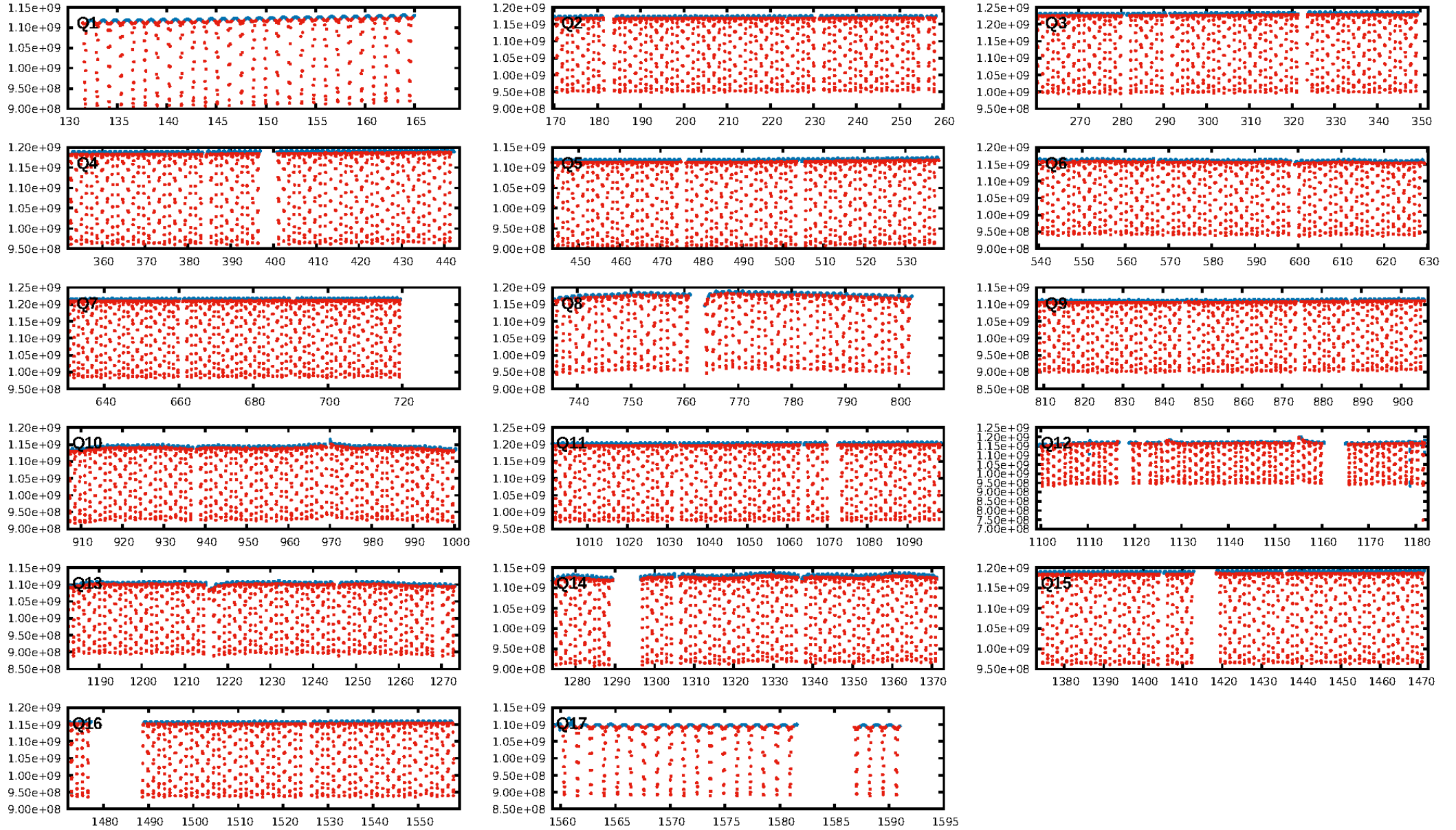
DV Fit Results:

Period = 1.21375 [0.00000] d
Epoch = 131.7429 [0.0000] BKJD
Rp/R* = 0.5830 [0.0017]
a/R* = 2.43 [0.00]
b = 0.89 [0.00]
Seff = 8406.66 [3202.76]
Teff = 2442 [233] K
Rp = 102.99 [31.30] Re
a = 0.0244 [0.0060] AU
Ag = N/A
Teffp = N/A

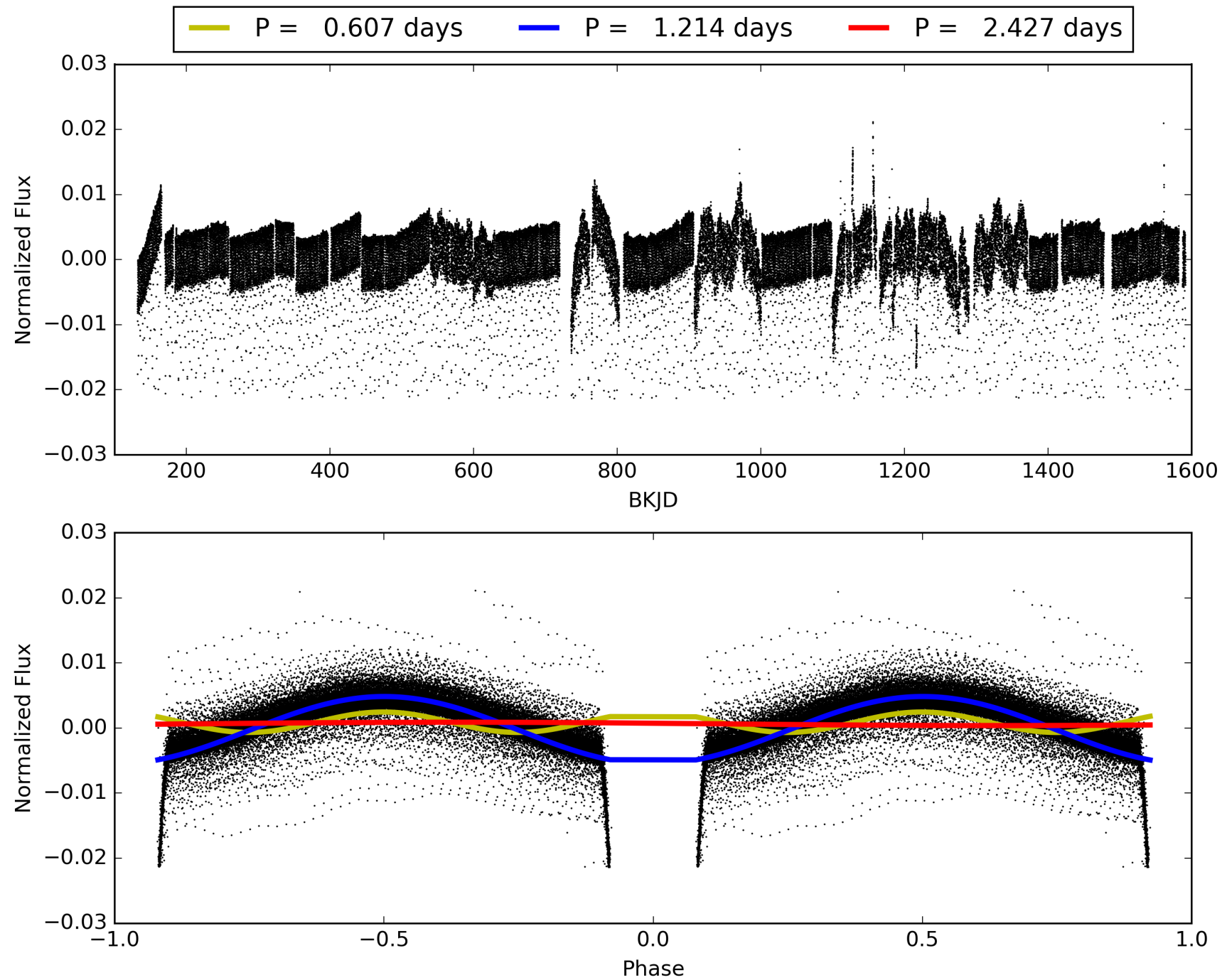
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1060/1060]
GhostDiagnostic-chr: 1.817
Centroid-sig: 0.0%
Centroid-so: 0.275 arcsec [1452.93σ]
OotOffset-rm: 3.078 arcsec [7.53σ]
KicOffset-rm: 4.267 arcsec [8.61σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010191056-01, PDC Light Curves

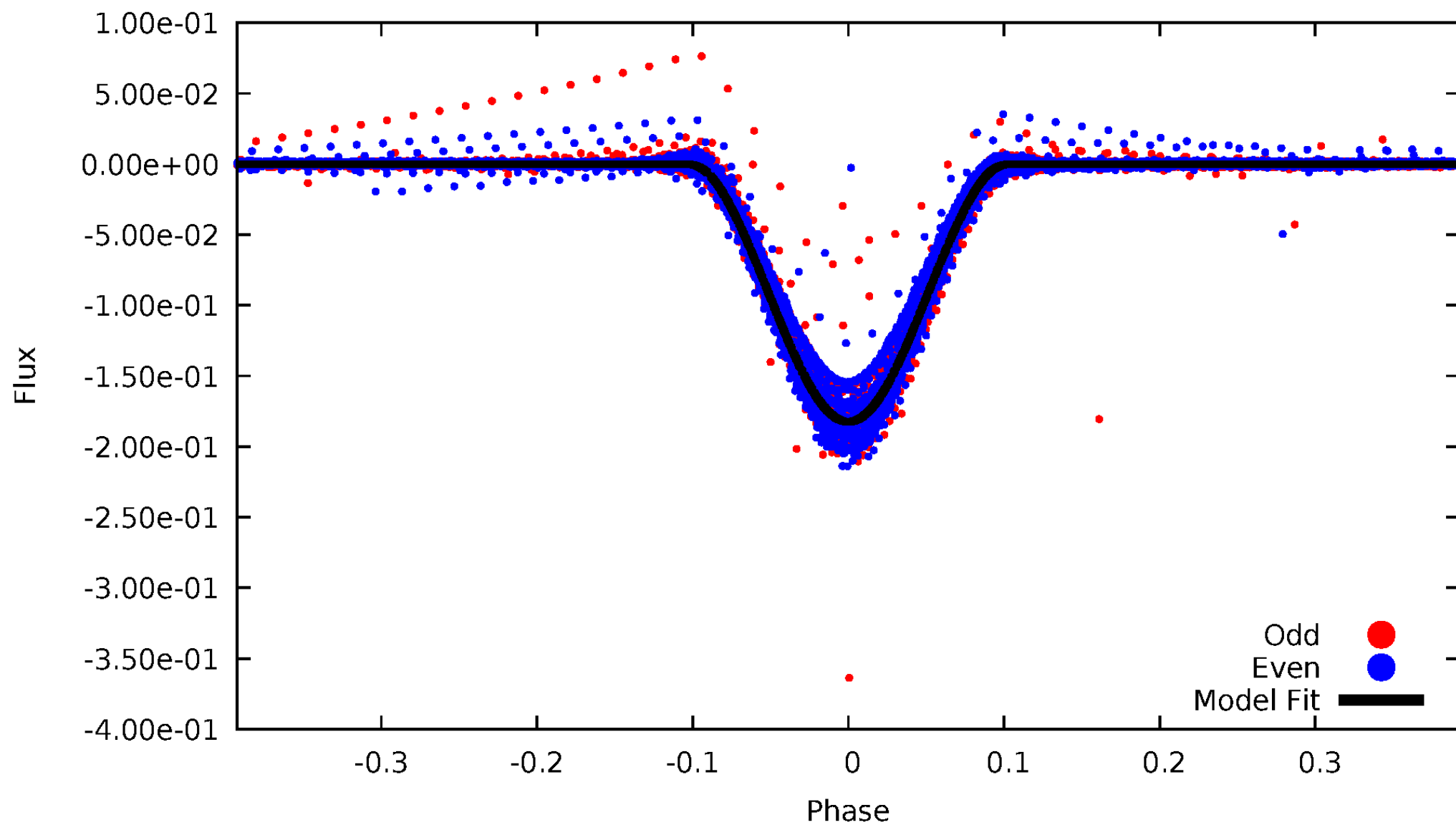


TCE 010191056-01



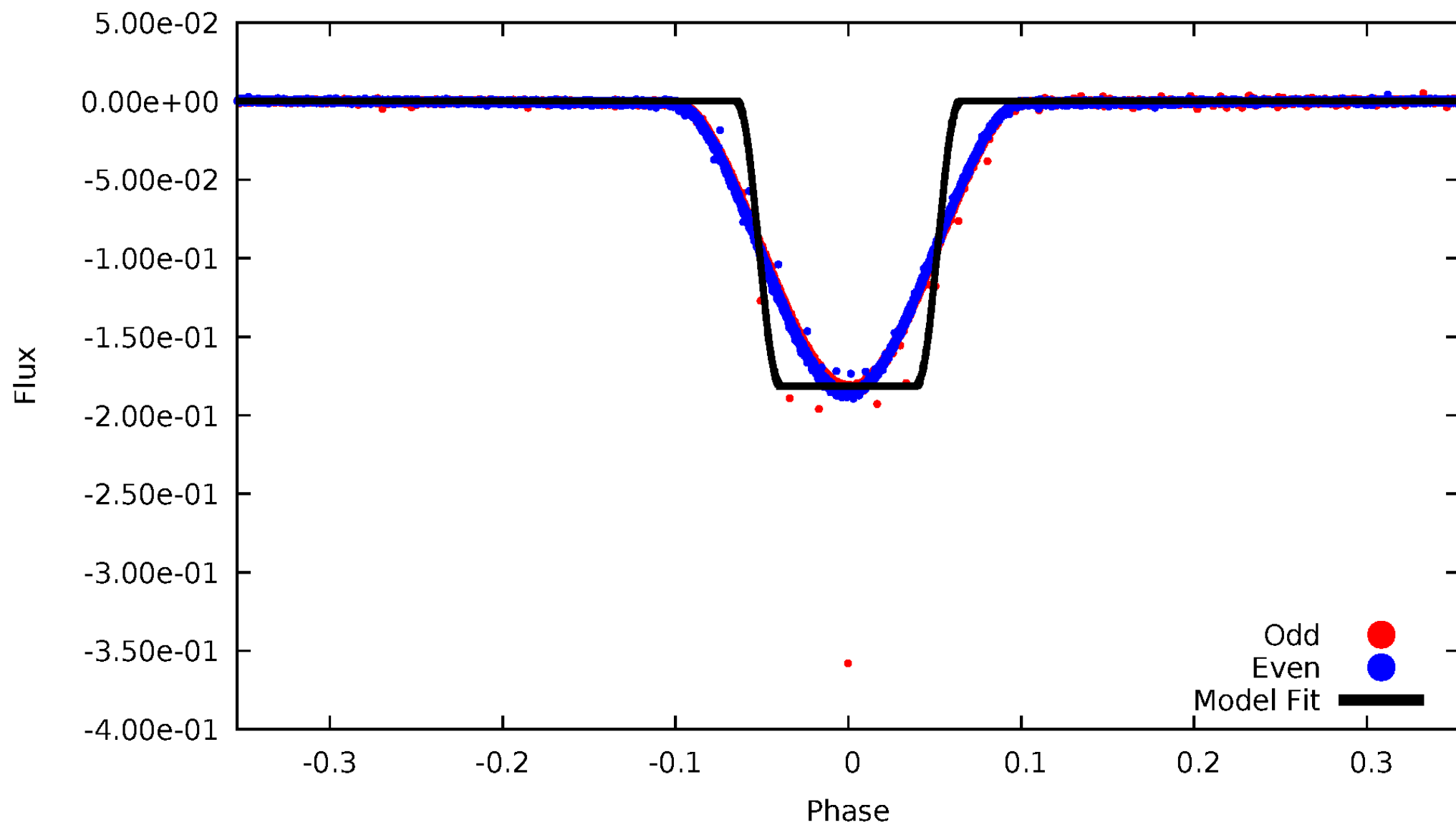
DV Odd/Even

TCE 010191056-01



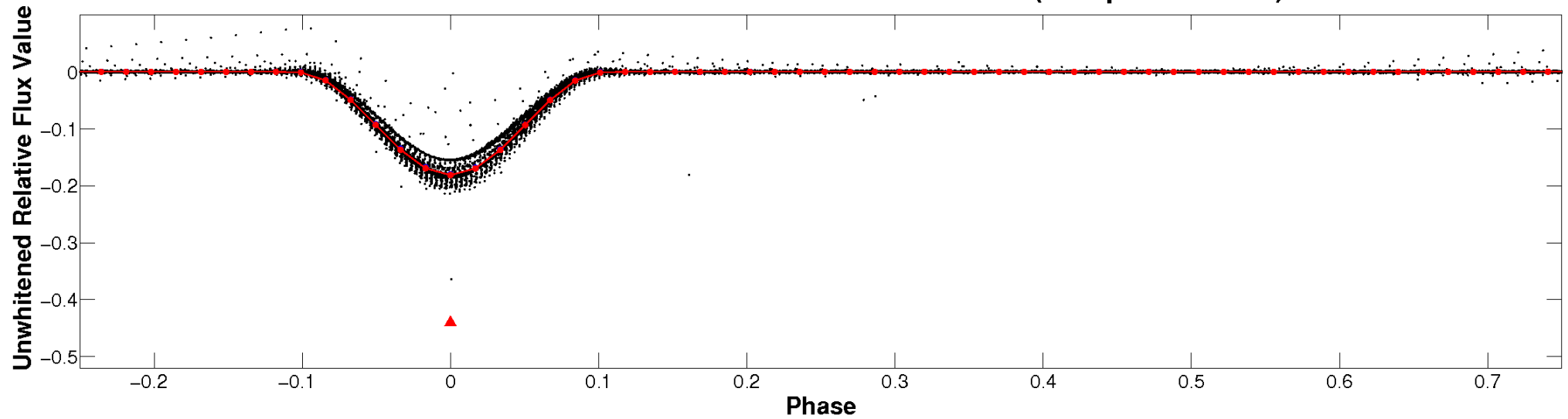
ALT Odd/Even

TCE 010191056-01

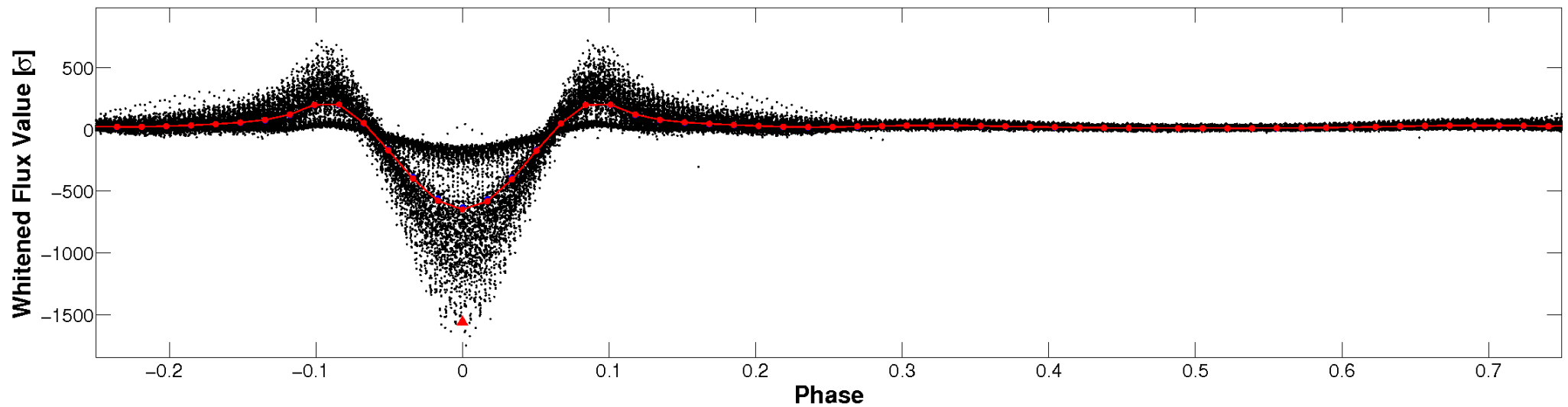


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

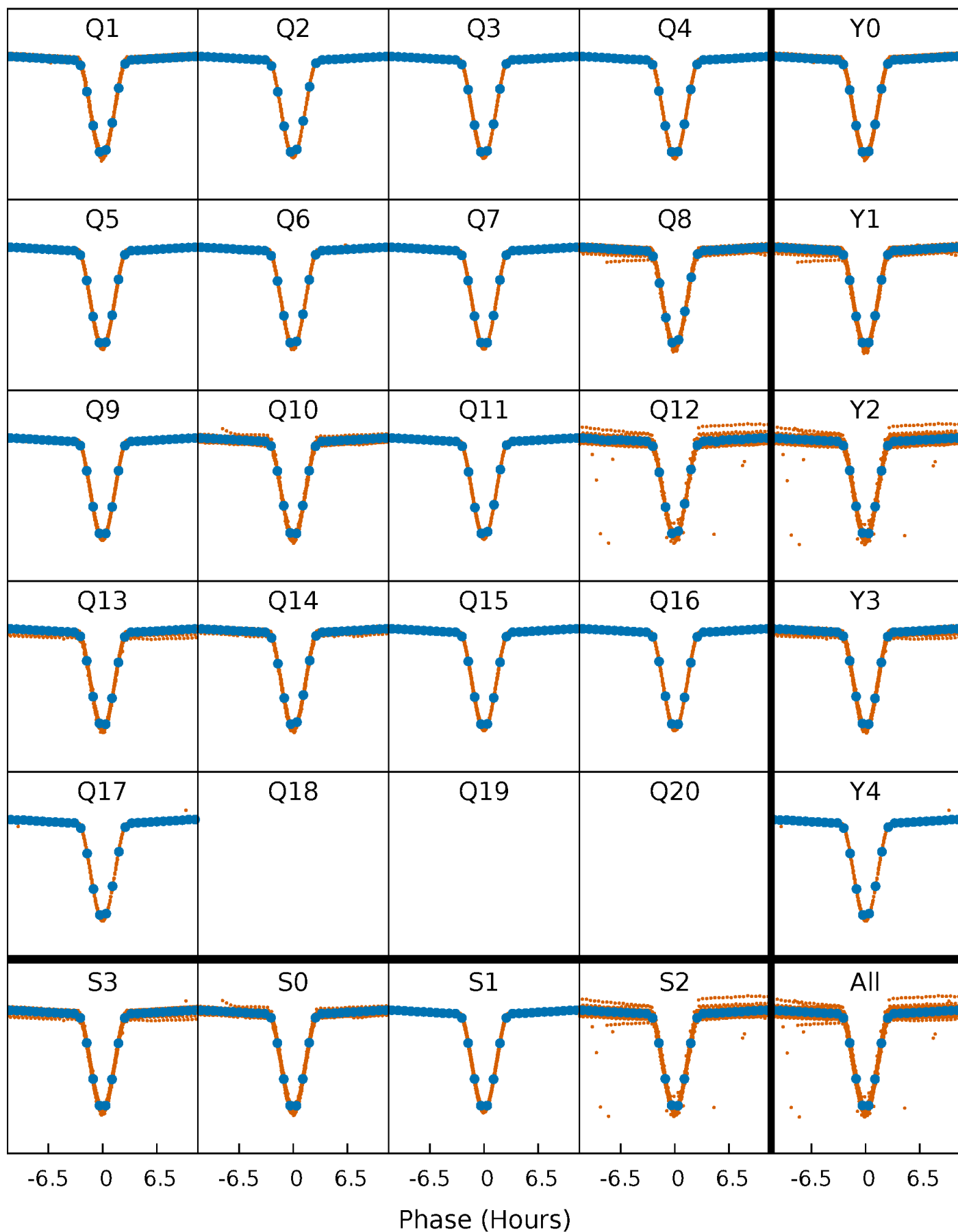


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



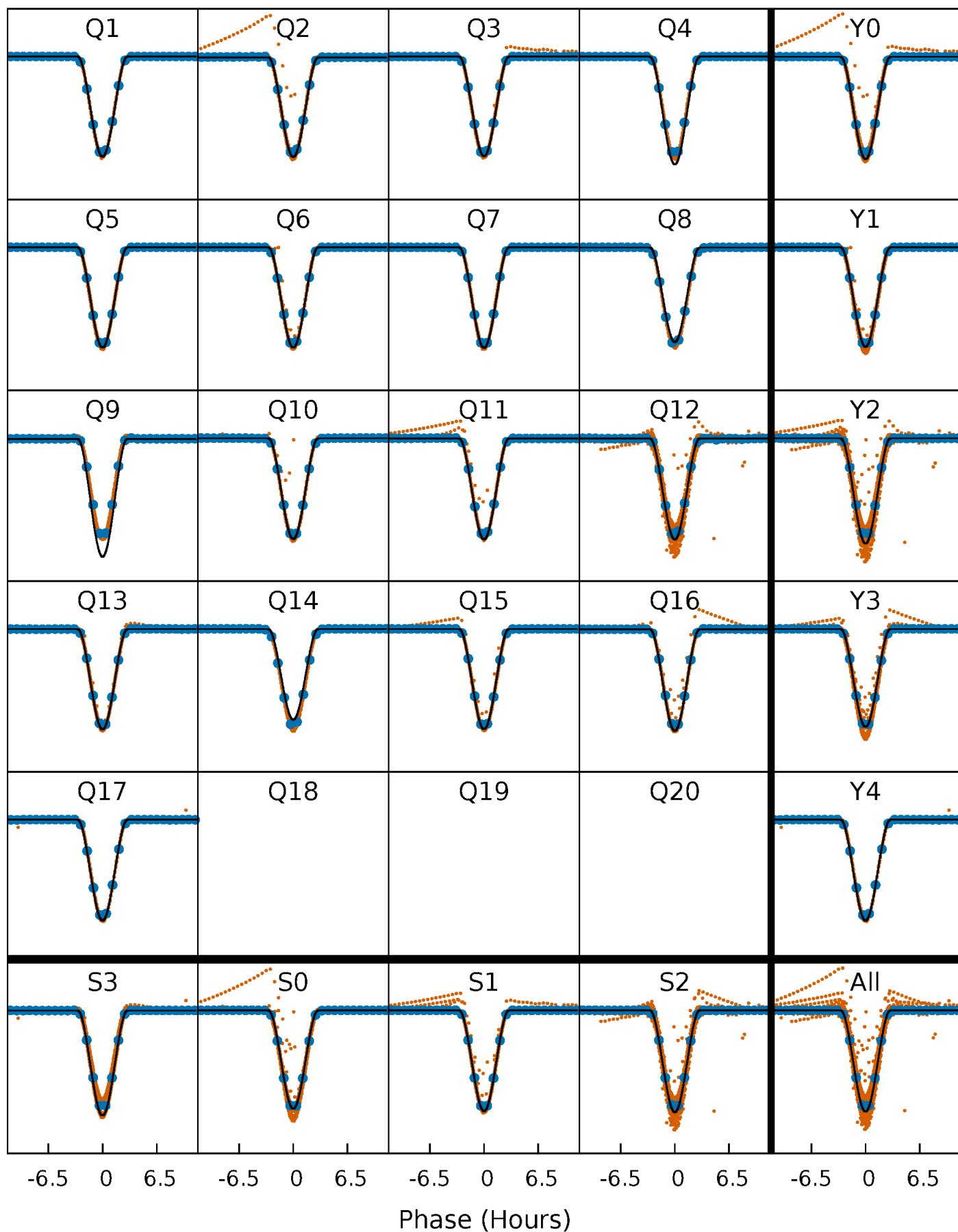
PDC Quarter-Phased Transit Curves

TCE 010191056-01 P= 1.213746 Days $T_0=131.742913$ (BKJD)



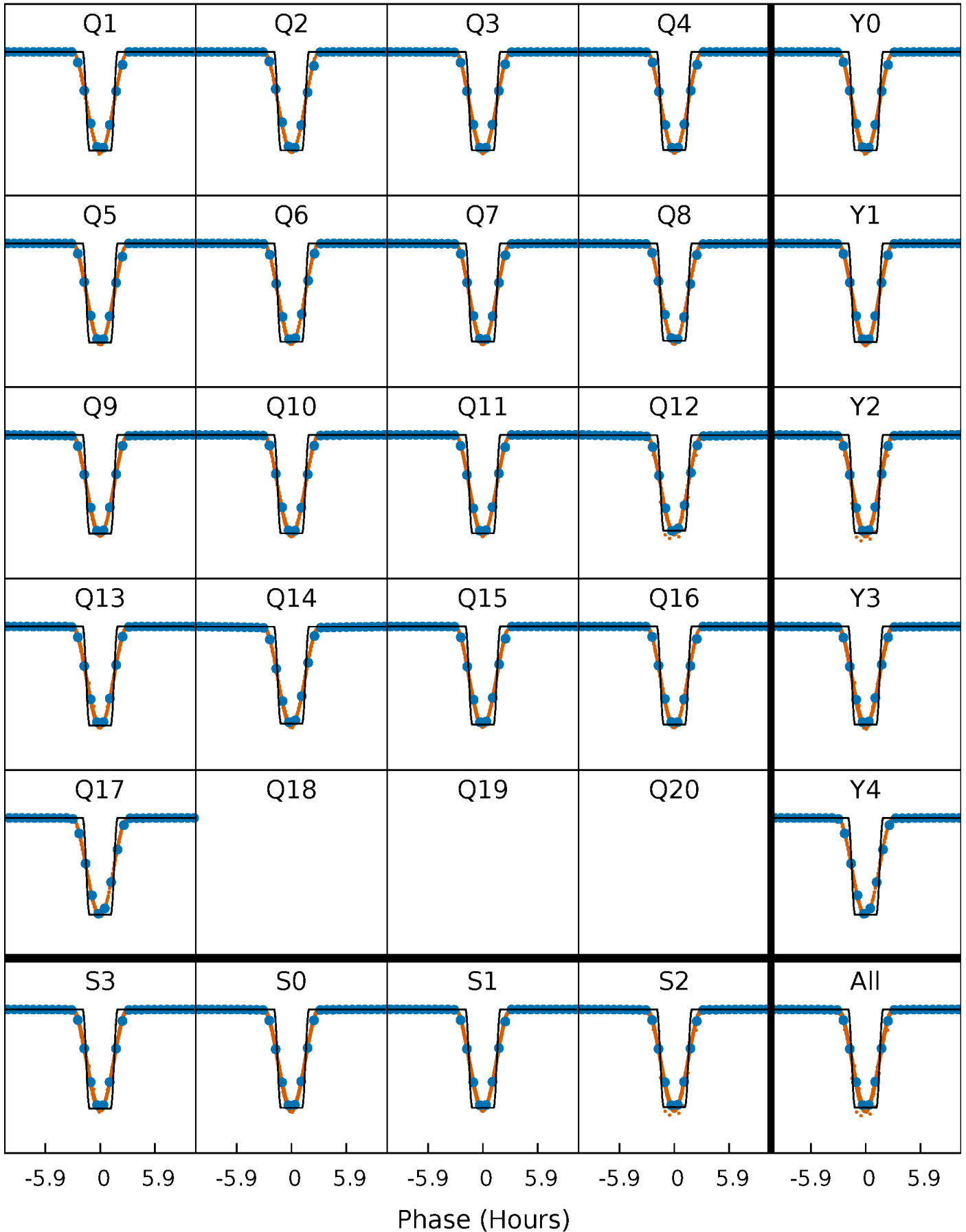
DV Quarter-Phased Transit Curves

TCE 010191056-01 P= 1.213746 Days $T_0=131.742913$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

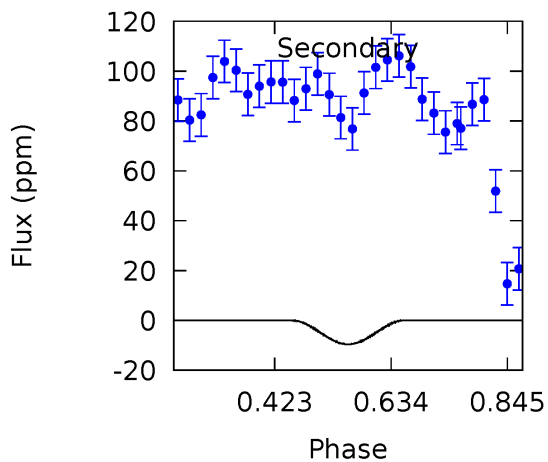
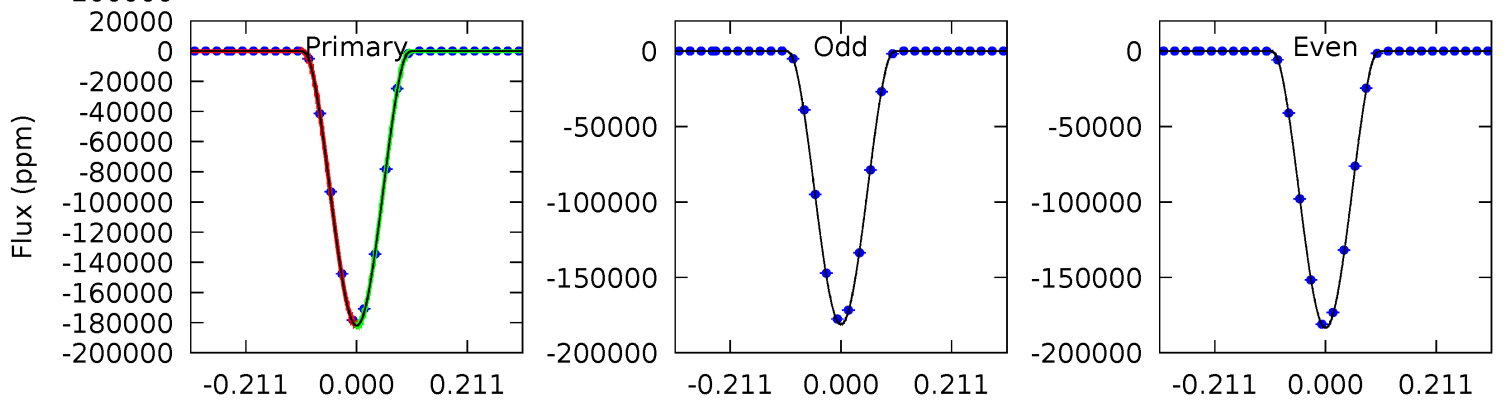
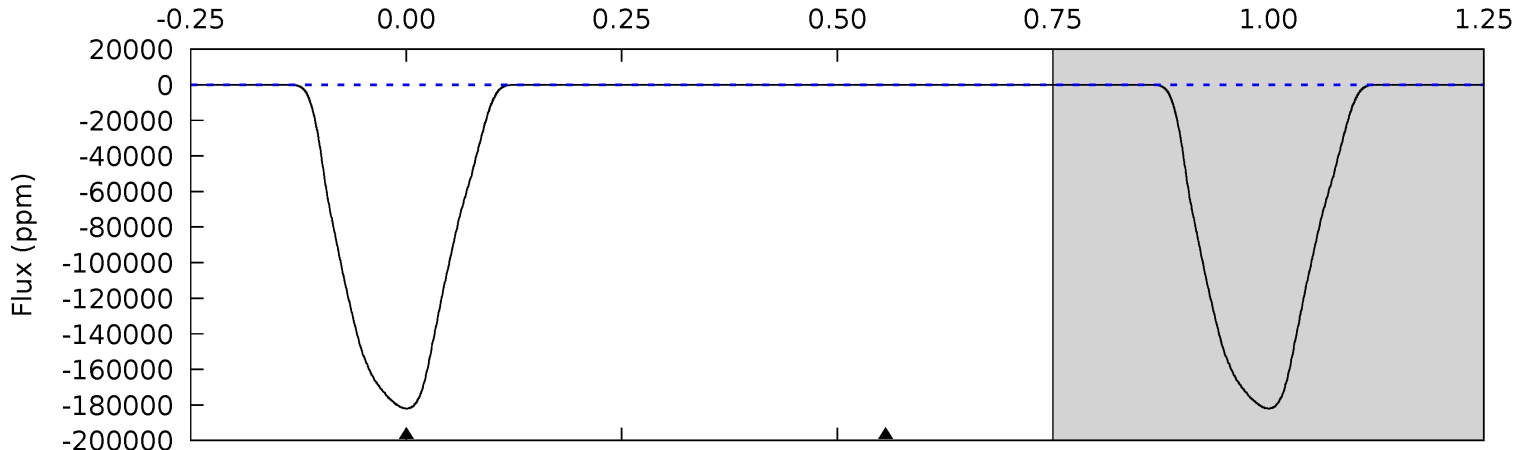
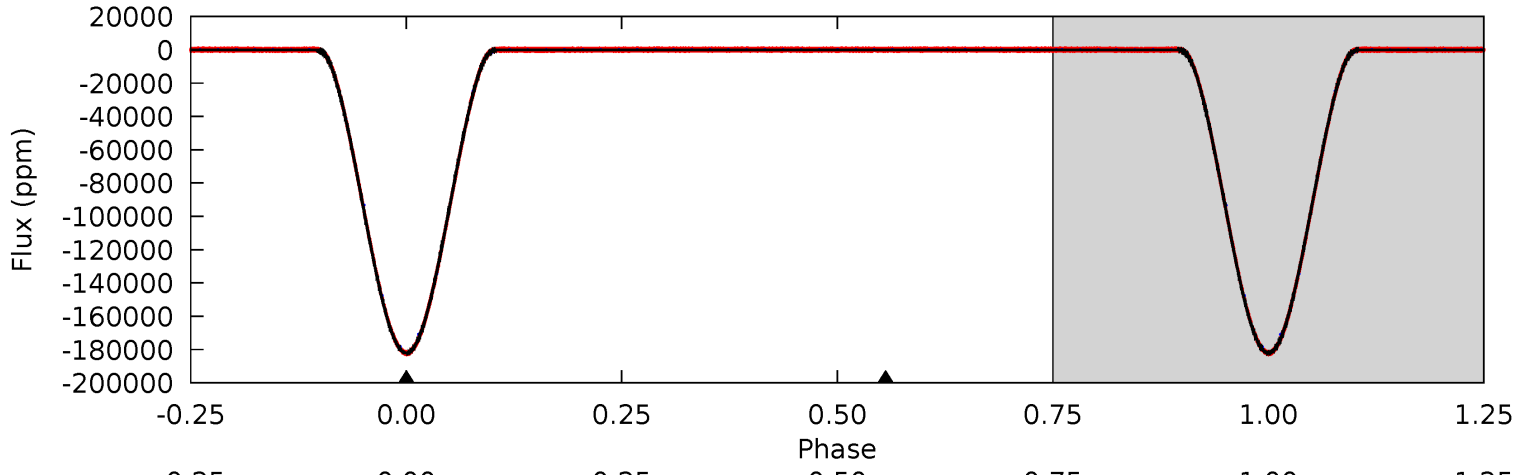
TCE 010191056-01 P= 1.213749 Days $T_0=131.741721$ (BKJD)



DV Model-Shift Uniqueness Test

010191056-01, P = 1.213746 Days, E = 130.529167 Days

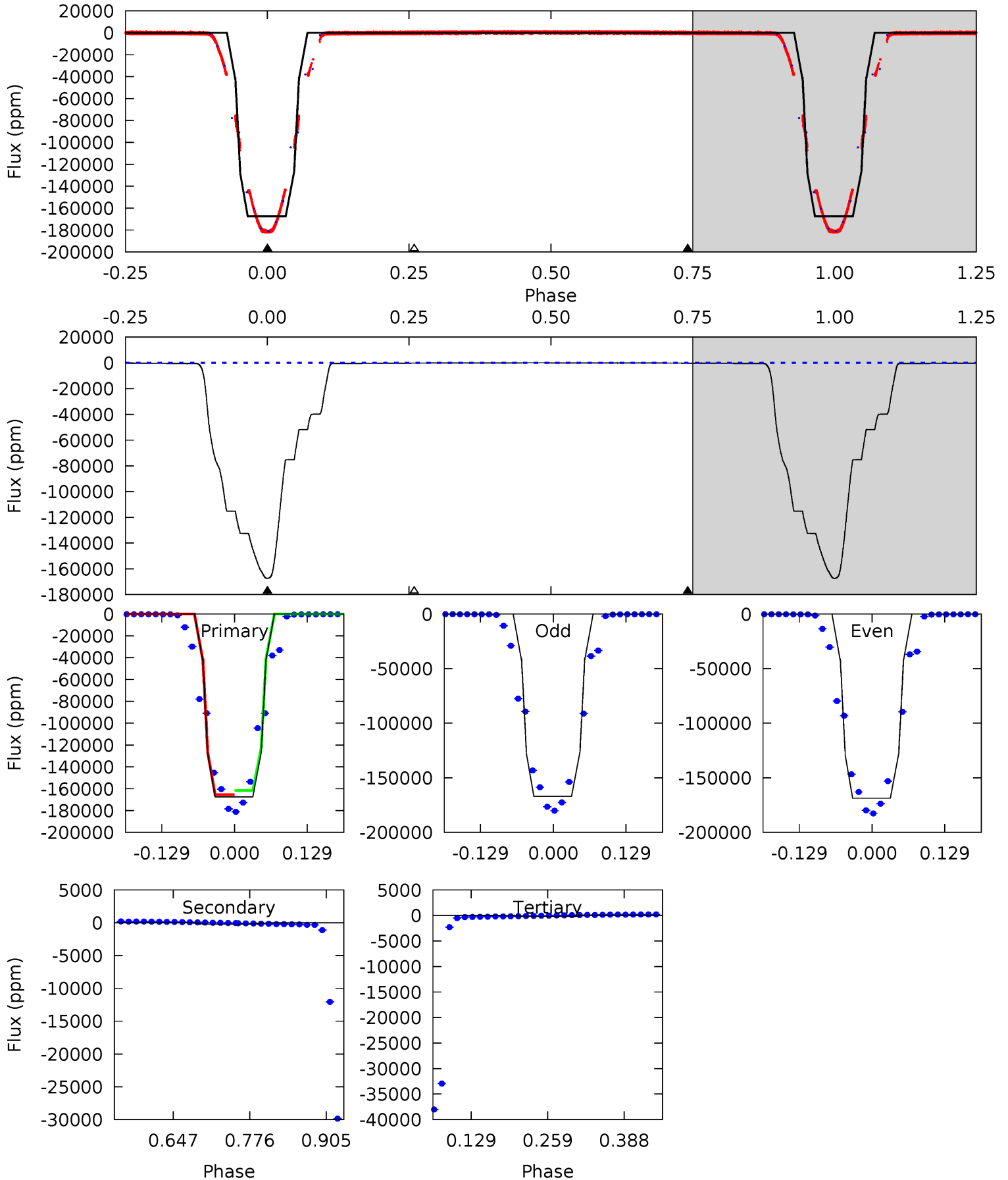
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41917	2.21	0	0	4.41	1.25	3.11	41917	41917	2.21	2.21	298.5	0.99	0.00	0



Alt Model-Shift Uniqueness Test

010191056-01, P = 1.213749 Days, E = 130.527972 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21585	28.5	23.7	0	4.51	1.52	20.8	21561	21585	4.75	28.5	131.7	1.00	0.00	0



Stellar Parameters For KIC 010191056

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6791^{+189}_{-260}	$4.137^{+0.185}_{-0.185}$	$-0.240^{+0.250}_{-0.300}$	$1.619^{+0.492}_{-0.403}$	$1.320^{+0.194}_{-0.216}$	$0.438^{+0.450}_{-0.223}$
	+3%/-4%	+4%/-4%	+104%/-125%	+30%/-25%	+15%/-16%	+103%/-51%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010191056-01 / KOI 5774.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-10 ± 4	$102.70^{+17.20}_{-13.22}$	3401^{+277}_{-228}	-3324^{+135}_{-167}	$0.000^{+0.000}_{-0.000}$
Alt.	-221 ± 8	$74.77^{+12.58}_{-10.08}$	3388^{+284}_{-242}	-3295^{+145}_{-170}	$0.013^{+0.004}_{-0.003}$

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

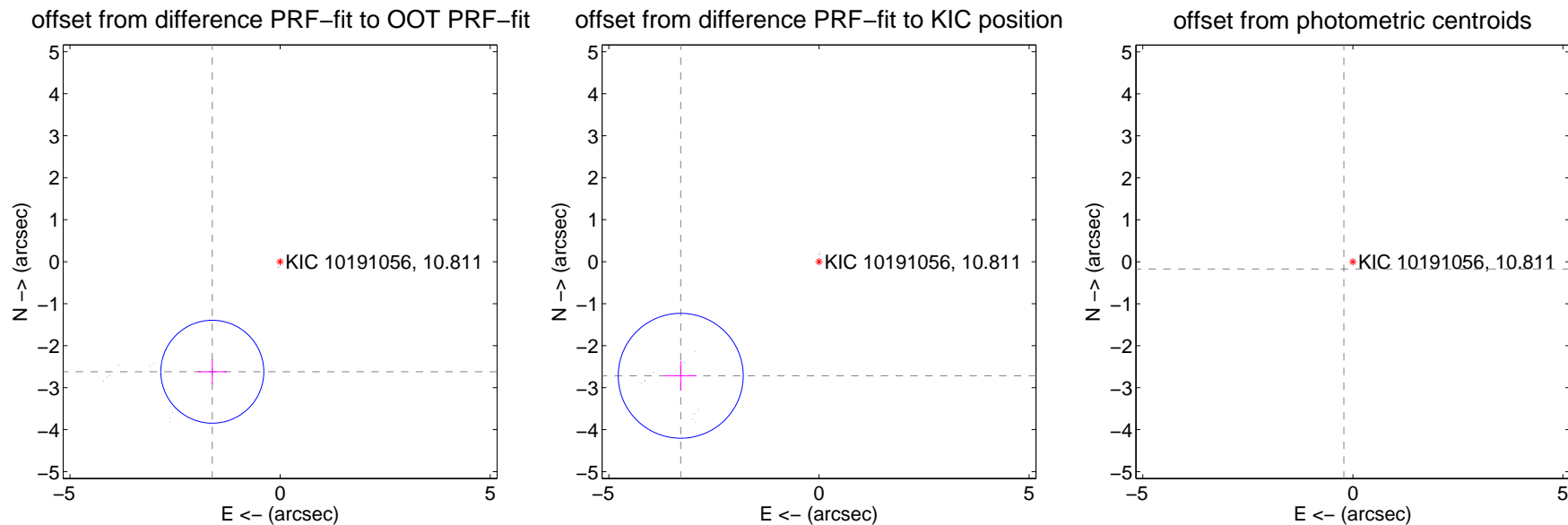
DV Centroid Data

Supplemental centroid analysis for 010191056-01. **Kepler magnitude: 10.81.** Transit SNR 22346.74

There are 10 quarters with good PRF difference image offsets

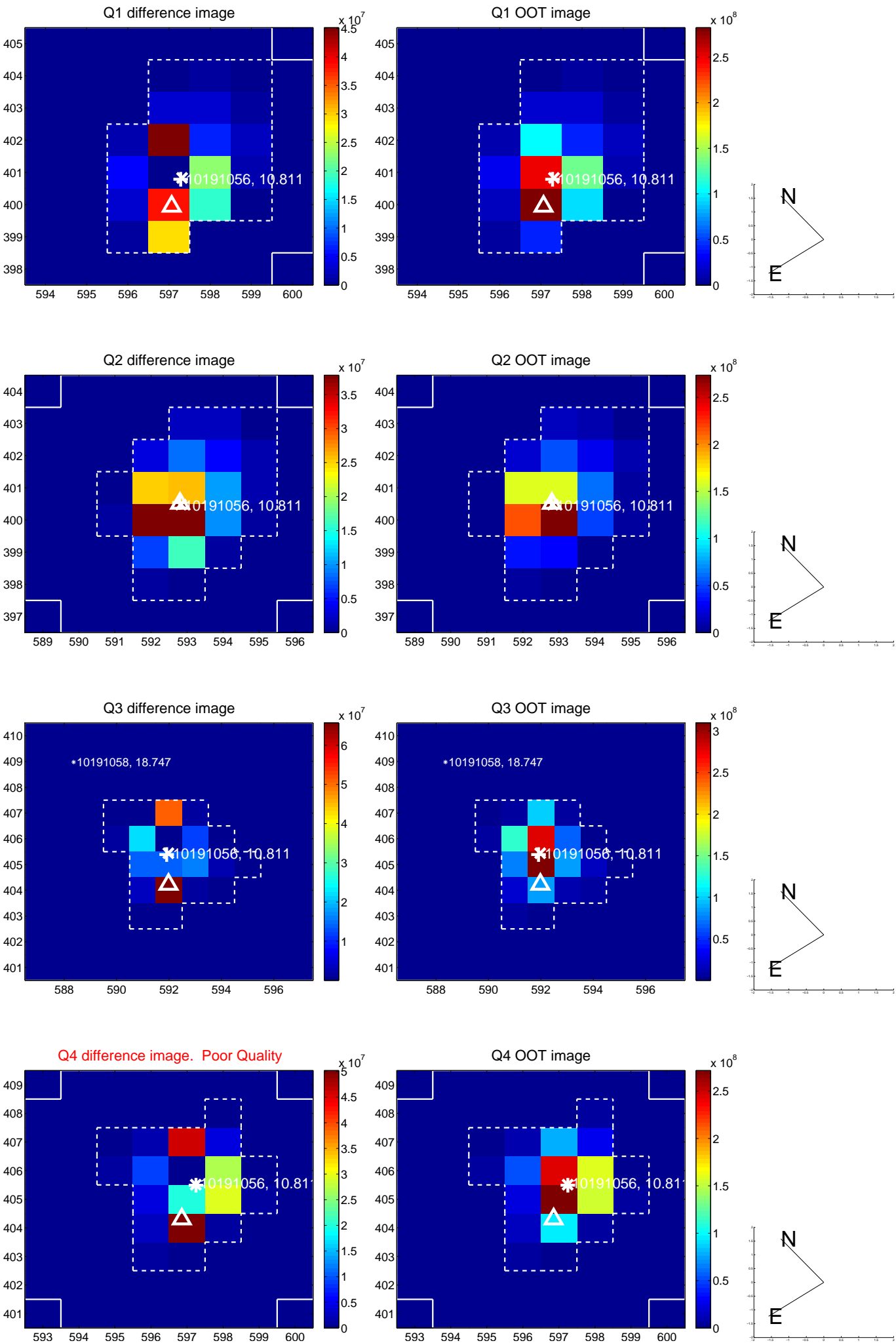
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.078 ± 0.408	7.53	1.613 ± 0.349	-2.621 ± 0.295
PRF-fit source offset from KIC position	4.267 ± 0.496	8.61	3.290 ± 0.376	-2.717 ± 0.353
photometric centroid source offset	0.27 ± 0.00	1452.93	0.21 ± 0.00	-0.17 ± 0.00

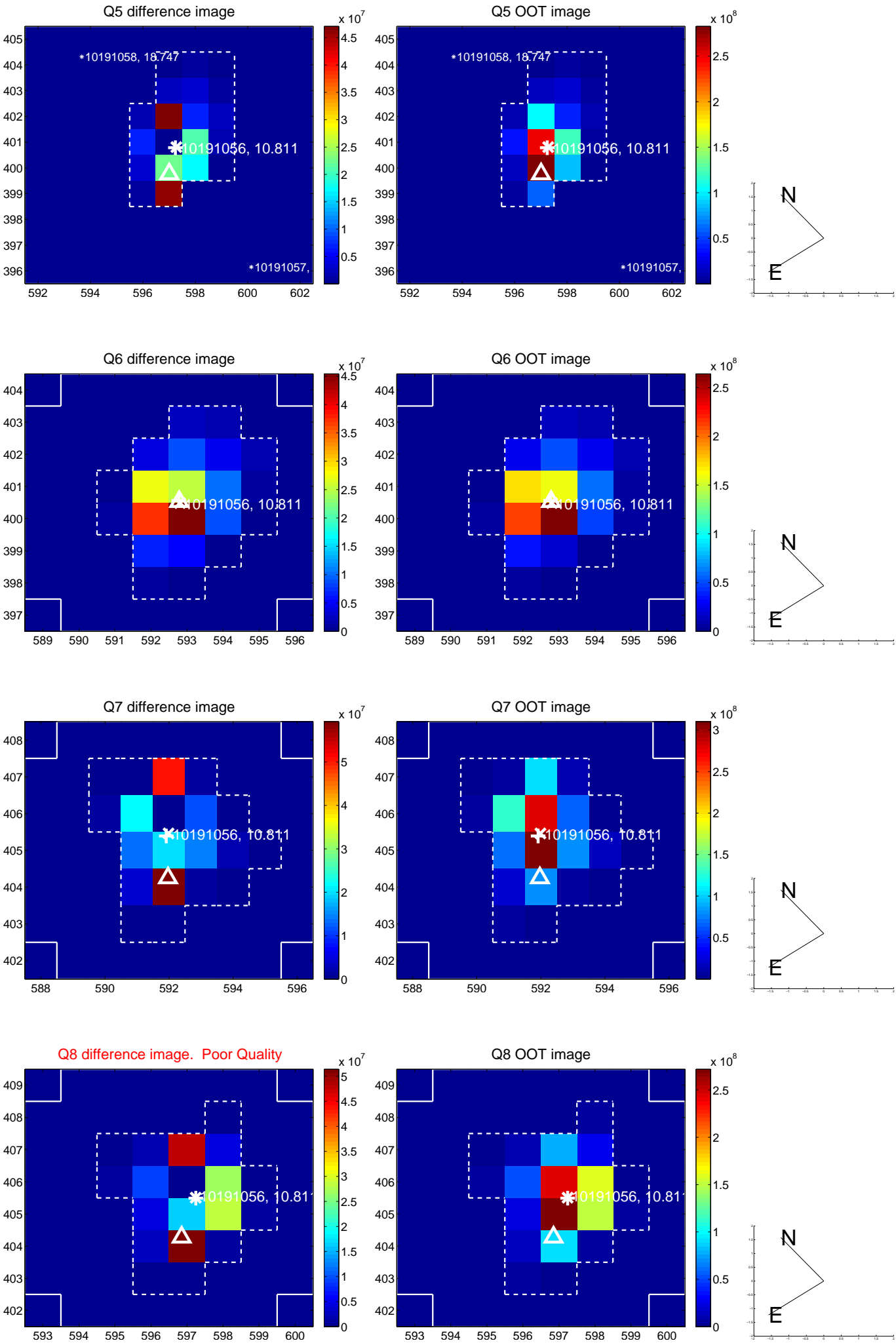


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

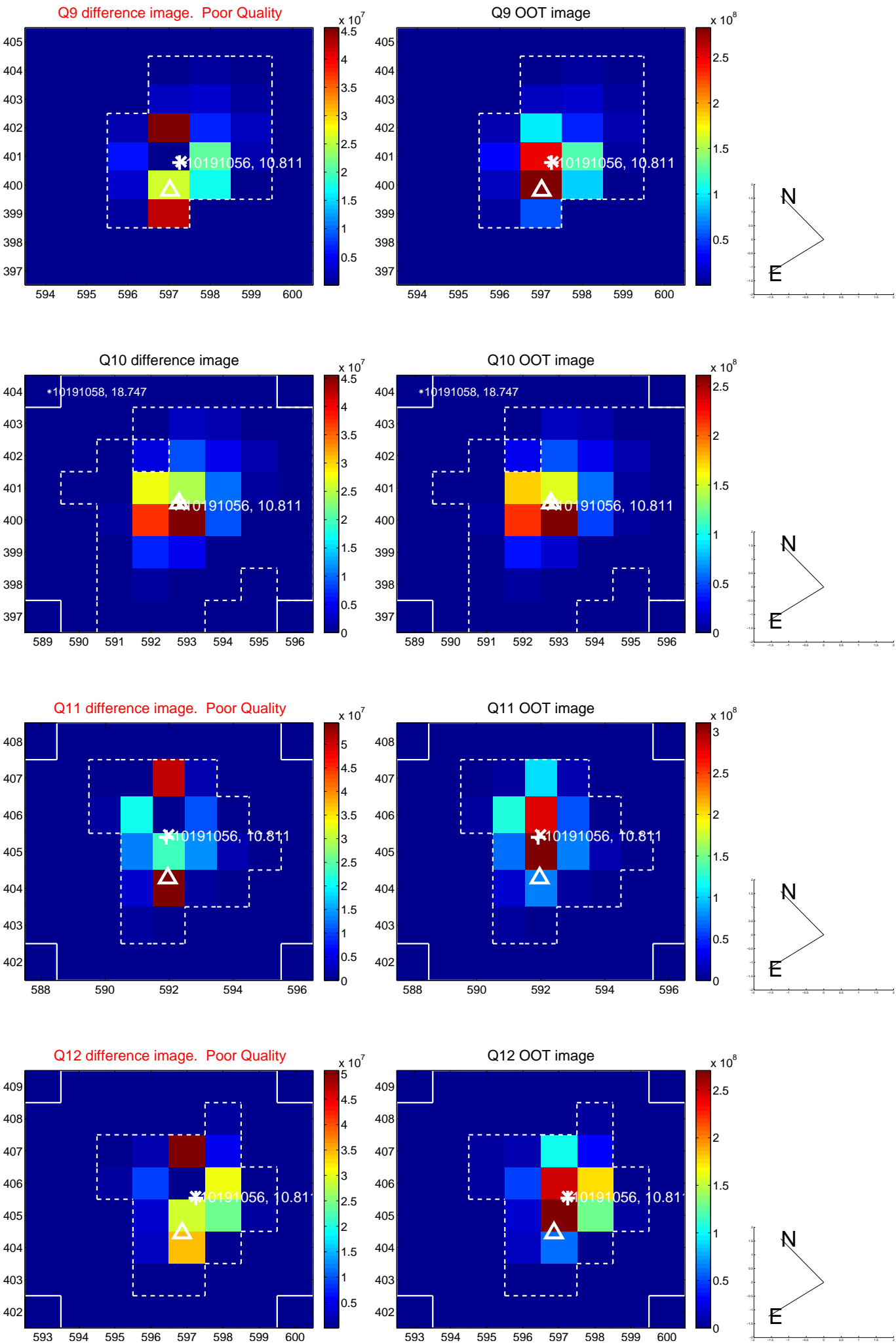
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



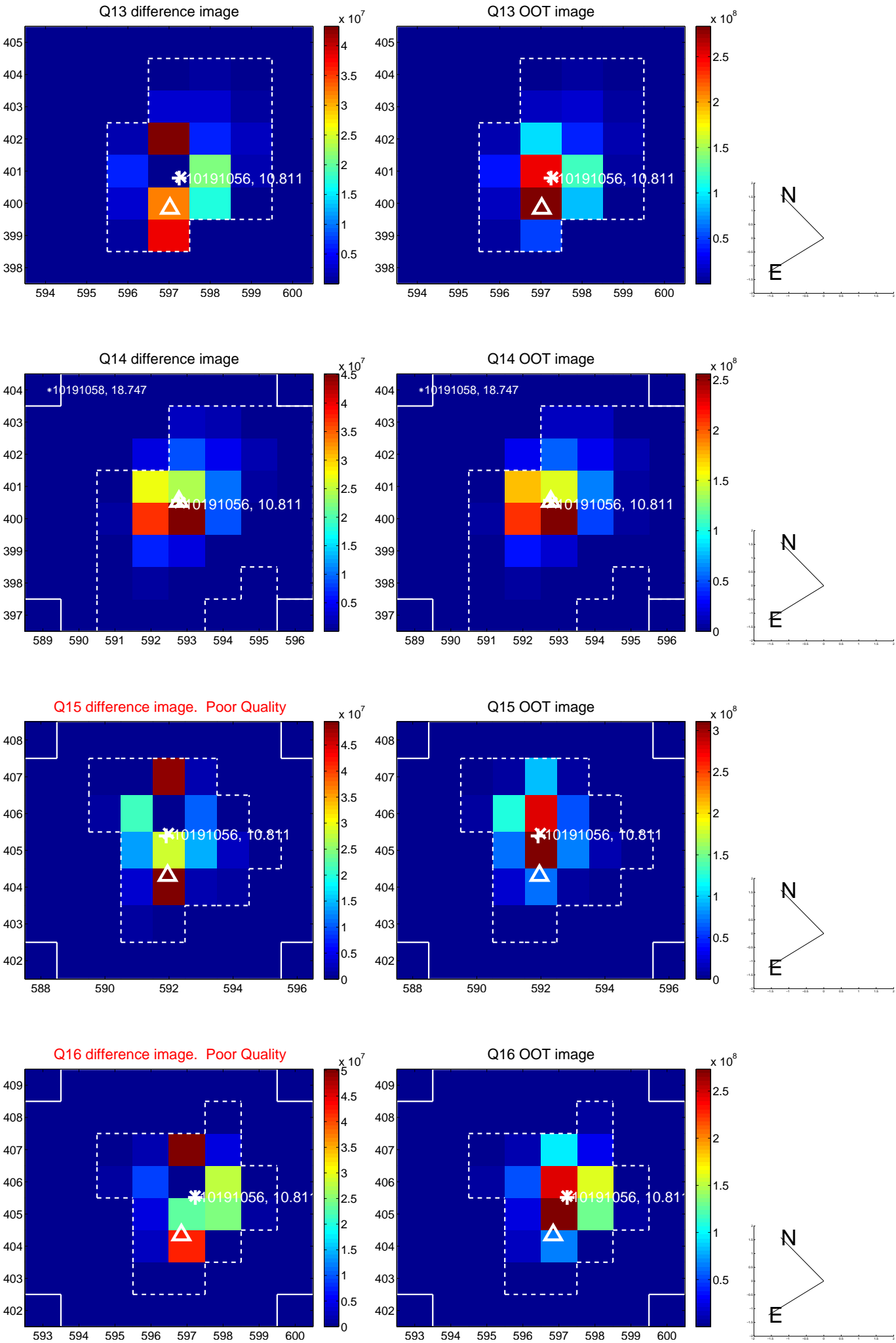
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



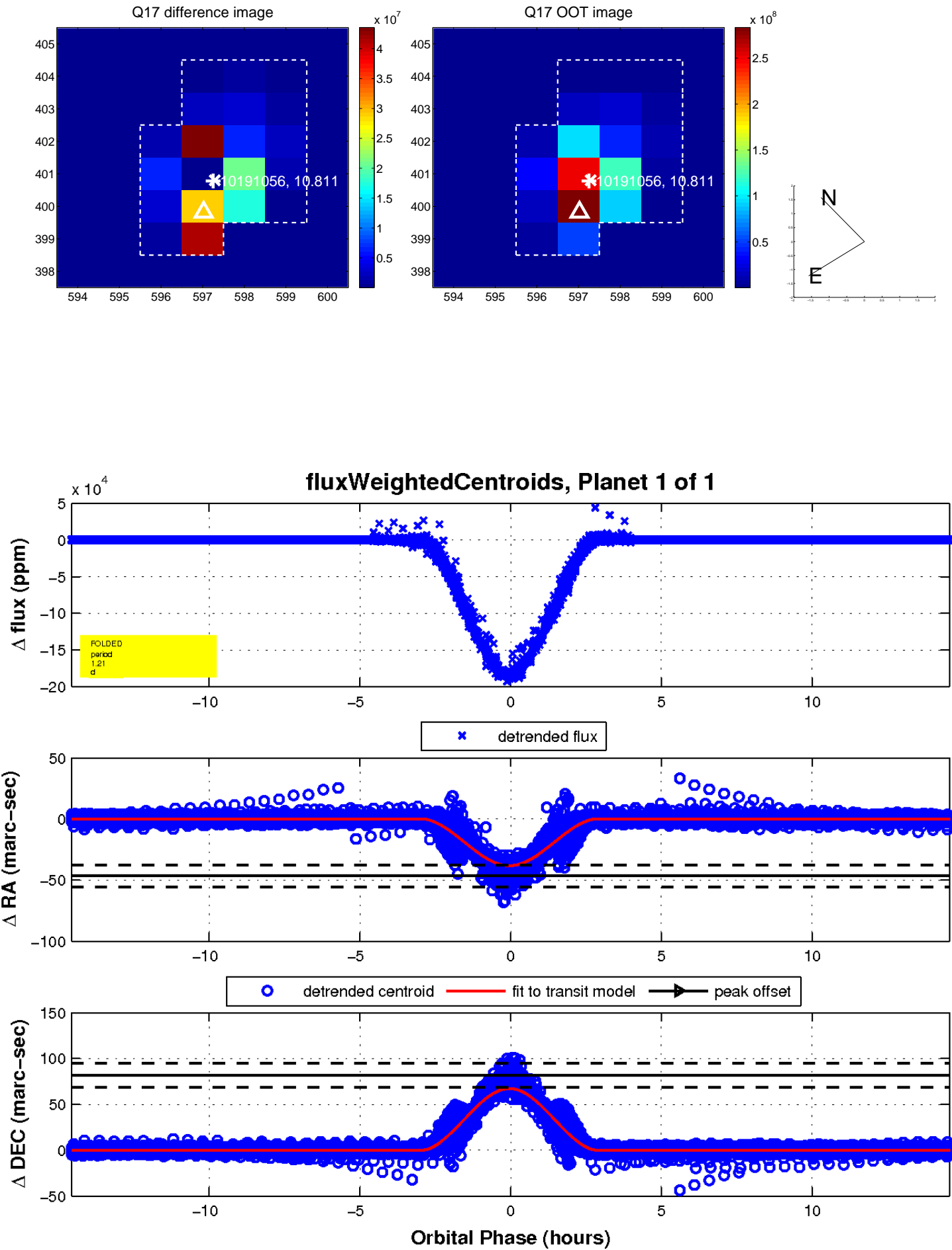
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

